

THE NORTH AMERICAN SPECIES OF HYDRO-
THASSA WITH NOTES ON OTHER CHRYSOMELIDÆ AND A DESCRIPTION OF
NEW SPECIES AND A VARIETY (COL.)

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Four North American species of *Prasocuris* are listed in the catalogues, but only one of these, *phellandri*, which also occurs in Europe, properly belongs in this genus. The other three and a new species described below are congeneric with the European species of *Hydrothassa*.

The two genera, *Prasocuris* and *Hydrothassa*, are closely related and differ only in form and in the presence or absence of a fine, elevated line at basal margin of prothorax. The species of *Prasocuris* are rather narrow and elongate and have a fine elevated line at basal margin of prothorax which is absent in the species of *Hydrothassa*, and the form in these is shorter and more oval.

The color and markings are nearly alike in all our species and similar to those of the European *hannoverana*. They are black, with or without more or less distinct aeneous tint, while the European species are more decidedly blue or greenish-blue. The markings consist of a large spot of variable size on the disk of prothorax, on the elytra a common sutural vitta, strongly dilated at the scutellum and on each side a broad lateral vitta, narrowing towards base. Apparently the markings in our North American species are less variable than in *hannoverana*, of which three color variations are recognized. The only noteworthy variation known to me is a specimen of our common *vittata* from Vermont in which the sutural vitta is largely confluent with the lateral black vitta but the marginal interval in its entire length remains pale, also the base and a very short line at base and a longer one at apex—the remnants of the usual pale discal vitta.

The females generally have the humeral callus prolonged for a short distance, forming a short, carina-like elevation.

KEY TO THE NORTH AMERICAN SPECIES OF HYDROTHASSA

1. Row of punctures on the pale, last elytral interval entire from base to apex and extending inwardly to or nearly to the second stria; black lateral vitta on each elytron not reaching the base, discal and marginal pale vittæ united at base2
 Row of punctures on the last elytral interval obliterated at or slightly behind middle; black lateral vitta on each elytron reaching the base; subsutural and marginal pale vittæ not united at base3
2. All elytral intervals impunctate, form narrower and relatively more elongate, size smaller, 3-4 mm.*vittata*
 Some of the elytral intervals more or less distinctly punctate, form broader and size larger, 4, 5-4, 75 mm.*obliquata*
3. Elytral epipleuræ with a single row of punctures close to the internal margin and occasionally a few scattered punctures near base; sides of prothorax nearly parallel or slightly convergent from about apical third to base, form rather elongate oval*boreella*
 Elytral epipleuræ with confused double rows of punctures; prothorax wider, sides distinctly divergent from about apical third to base; form more regularly oval*ovalis*

Hydrothassa vittata Olivier.

This well-known, common and widely distributed species is recorded also from Oregon in Leng's catalogue, but this remains to be verified. This species is rather narrower and more elongate, especially the males, than any other North American or European species.

Hydrothassa obliquata Crotch.

This species has a wider distribution than is recorded. It is known to me from Massachusetts, Forest Hills (Parshley); Illinois; Indiana; Manitoba; Miami (Wallis), and Rosebank (Wallis).

It is larger and more robust than the other species. The punctation of some of the elytral intervals is variable: some specimens have the punctures more numerous, others have only a few punctures, the lateral rows of punctures are more or less regular, but occasionally confused with those of the intervals.

Hydrothassa boreella new species.

Color and maculation as in our other species, but the lateral black vitta on each elytron extending to base; discal and lateral pale vittæ not united at base; legs generally black, tibiæ at apex more or less pale; form of *obliquata*, but much smaller. Head sparsely punctate, a little denser anteriorly. Prothorax about one third wider than long, sides nearly parallel from base to about apical third, thence gradually narrowing to the anterior angles; surface sparsely and irregularly punctate, a little denser in the lateral impressions. Elytra elongate oval; intervals smooth, impunctate; serial punctures moderate; row of punctures on the pale interval next to the lateral margin obliterated at or behind middle; metasternum sparsely punctate, abdomen feebly and more finely punctate. Length 4 mm.

Manitoba: Husavick, July (Roberts in Coll. Wallis).

Alberta: Edmonton, June, July (Carr); Cypress Hill, June (Carr), Wostock, October (Carr).

British Columbia: Middy Creek, Indian Meadow, August (Hopping).

The type is a specimen from Edmonton in the Museum collection, paratypes in the collections of Messrs. Hopping, Carr, Wallis and Frost.

This species is closely allied to *ovalis* but the elytra are less regularly oval, the prothorax is narrower and more or less parallel-sided behind, the head apparently larger and the elytral epipleuræ have only a single row of punctures very close to the internal margin.

Hydrothassa ovalis Blatchley.

This species is known so far only from Indiana. Its form is more regularly oval than any of our other species or any of the European species known to me. The form, larger prothorax, with sides diverging behind to the basal angles, apparently smaller head and epipleuræ with a confused double row of punctures will separate it from *boreella*. The black spot on prothorax is also larger, but that may be variable.

Leptinotarsa haldemani Rogers.

In the Leng catalogue this species is recorded from Mexico and Texas, the latter locality, however, with a question mark.

The species was described by Rogers from Fredericksburg, Texas, and I have specimens before me from New Braunfels and San Antonio, Texas.

Zygogramma thoracica Jacoby.

I have a specimen, taken with specimens of *continua* (*fasciati-pennis* Jac.) in Arizona, which is apparently intermediate between the latter and *thoracica*. The head in this specimen is black posteriorly, the legs are in great part black with metallic tint and the prothorax at base obscurely black, otherwise it agrees with the description of *thoracica* and except coloration does not differ from *continua*. *Z. thoracica* was described from a single specimen from Durango City, Mexico.

Calligrapha amelia confluens new variety.

The metallic-green sutural, subsutural and the arcuate stripe near the latter on each side of the elytra broadly confluent, forming a pattern similar to the one seen in *rhoda* and *scalaris*, but the arcuate stripe next to the subsutural is usually not produced laterally at apex as in these two species and the sutural interval is more or less pale, generally for a short distance below middle, but is very rarely nearly entirely pale or entirely metallic. The humeral lunule is not broken up into several spots but is very heavy as in *scalaris* and *rhoda*. The sub-basal spot enclosed by the humeral lunule as in *amelia*. Length 7-8 mm.

Portaupique, Nova Scotia (Frost, on Alnus); Casco Bay, Maine, September (Engelhardt); Monmouth, Maine, June (Frost); Massachusetts.

This form looks superficially like *rhoda* but is slightly more elongate, and the color of prothorax and elytral markings are mostly bluish-green.

Two specimens of the small series collected by Mr. Engelhardt at Casco Bay are somewhat intermediate between the variety *confluens* and typical *amelia*. In both the lower branch of the short, arcuate stripe next to the subsutural is detached; in one of these specimens the sutural interval is almost entirely pale, in the other this interval is pale in about a little more than apical half.

Calligrapha alni new species.

Very near *philadelphica* but the markings on the elytra generally heavier, the humeral lunule very often confluent with the lateral spot, the two spots

within the humeral lunule usually connected apically; the arcuate stripe next to the subsutural entire or nearly so; the sutural and subsutural intervals, the punctures and often the intervals between these more or less dark reddish. The prothorax is dark olive to brownish and the femora occasionally more or less infusate or piceous.

Sherborn, Massachusetts (Frost) on *alnus*; Stowe, Vermont (Engelhardt); Mammouth, Maine (Frost) on *alnus*; Peterborough, Ontario; Westchester Lake, Nova Scotia (Frost).

Type in the Museum collection, paratypes in the Museum collection and that of Mr. Frost.

The markings of *alni* are nearly as in *amelia* and both feed on the same plant, but the latter species has the suture always metallic green, the prothorax slightly narrower, less dull and bluish-green and the spot enclosed by the humeral lunule is generally solid and more or less lunate—in *alni* U-shaped when the usual two spots are confluent apically.

The reddish color of the elytra seems to be more persistent in *alni* than in other species in which, according to Knab, the red color seen in sexually mature specimens disappears after death. Old specimens of *alni* collected in different localities in 1907, 1913, 1915, 1916, and 1921 show as much of the red color as those collected as recently as 1927.

This species is quite close to *philadelphica* except being a little more robust and having the elytral markings heavier. I would have made *alni* a variety of that species, but followed Knab and others in deference to their opinion that different food plants indicate also different species. *C. philadelphica* is said by Knab to occur only on *Cornus*.

Calligrapha incisa Rogers.

Of this species, which is recorded from Kansas and Nebraska, I received lately, through the kindness of Mr. Wallis, a specimen collected at Wawunessa, Manitoba (R. D. Bird).